

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 24 NOV 2005

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Applicant's or agent's file reference ksw/ch/39460		FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/GB2004/004343		International filing date (day/month/year) 13.10.2004		Priority date (day/month/year) 22.10.2003
International Patent Classification (IPC) or national classification and IPC A01J7/04, A01J7/02				
Applicant DUKE, James Richard John				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 22.08.2005		Date of completion of this report 25.11.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Moeremans, B Telephone No. +31 70 340-4434		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2004/004343

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-11 as originally filed

Claims, Numbers

1-25 as amended (together with any statement) under Art. 19 PCT

Drawings, Sheets

1/3-3/3 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2004/004343

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees, the applicant has:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☐ neither restricted nor paid additional fees.
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
 - ☐ the parts relating to claims Nos. .

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-25
	No: Claims	
Inventive step (IS)	Yes: Claims	1-25
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item IV

Lack of unity of invention

There are 2 inventions claimed in the present international application, covered by the following groups of claims:

- Group 1: claims 1-12: teat cup and milking cluster wherein the nozzle means is arranged to discharge fluid in a direction towards the discharge passageway of the liner;
- Group 2: claim 13-25: milking equipment and method of milking, wherein the treatment fluid is discharged into the head portion of the teat cup and on to the teat as the teat cup is withdrawn.

It is considered that the application does not comply with the requirement of unity of invention (Rule 13.1 PCT) for the reasons indicated below.

The definitions of the different claimed inventions are only intended to identify said inventions in a concise manner. They may well, as such, comprise terms or generalisations which upon a close analysis could be found to extend the defined subject-matter beyond the contents of the applications as filed.

Document EP-A-0 277 396 discloses (see figure 2) a teat cup, a milking cluster, a milking equipment and a method with nozzle means (61) for discharging fluid into the head portion of the liner.

- The special technical features, as defined in Rule 13.2 PCT, of the first group of claims, which are intended to be a contribution over this prior art, i.e. the nozzle means which is arranged to discharge fluid in a direction towards the discharge passageway of the liner, apparently solve the problem of flushing the interior of the liner when the teat cup is in an inverted rest position after take-off.
- The special technical features, as defined in Rule 13.2 PCT, of the second group of claims, which are intended to be a contribution over said prior art, i.e. discharging the treatment fluid into the head portion of the teat cup and on to the teat as the teat cup is withdrawn apparently solve the problem of coating the teat with treatment fluid.

No same or similar special technical features can be determined and different underlying

problems are solved. Moreover, it is clear that the 2 claimed inventions can be applied independently of each other, i.e they are not necessarily inter-related.

It appears therefore that no technical relationship between the various claimed inventions exists involving one or more of the same or corresponding special technical features, beside the common and already well known feature of the teat cup, the milking cluster, the milking equipment and the method disclosed in document EP-A-0 277 396. The 2 groups of claims are thus not so linked as to form a single general inventive concept.

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

D1: EP-A-0 277 396

D2: GB-A-918,766

D3: EP-A-1,219,167

D4: WO-A-01/17338

D5: EP-A-0 543 463

1. Document D1, which is considered to represent the most relevant state of the art, discloses (see figure 2) a teat cup with a nozzle means (61) for discharging fluid into the head portion of the liner, from which the subject-matter of claim 1 differs in that the nozzle means is arranged to discharge fluid in a direction towards the discharge passageway of the liner
 - 1.1. The subject-matter of **claim 1** is therefore new (Article 33(2) PCT).
 - 1.2. The problem to be solved by the present invention may be regarded as to flush the interior of the liner when the teat cup is in an inverted rest position after take-off
 - 1.3. The solution to this problem proposed in **claim 1** of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
Starting from the teat cup disclosed in figure 2 of D1, the skilled person would:
 - either come to the solution disclosed in figure 3 (nozzles 17) of D1;

- or come to the solution disclosed in D5 (see figures 2, 3 and 5; see column 3, lines 36-53) for solving the problem posed.

Therefore, starting from the embodiment of figure 2 in D1, the skilled person would not modify the existing nozzle means such as claimed in order to solve the problem posed.

- 1.4. **Claims 2-12** are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
2. Document D1, which is considered to represent the most relevant state of the art, discloses (see figure 2) a milking equipment and method of milking, wherein the treatment fluid is discharged into the head portion of the teat cup and on to the teat, from which the subject-matter of claim 1 differs in that the treatment fluid is discharged into the head portion of the teat cup and on to the teat as the teat cup is withdrawn.
- 2.1. The subject-matter of **claims 13 and 19** is therefore new (Article 33(2) PCT).
- 2.2. The problem to be solved by the present invention may be regarded as to coat the teat with the treatment fluid.
- 2.3. The solution to this problem proposed in **claims 13 and 19** of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons: There is no hint in the prior art documents suggesting to discharge the treatment fluid on the teat during the withdrawal of the teat cup in order to solve the problem posed. The skilled person has no reason to modify the existing equipment and method, which already perfectly solve the problem posed.
- 2.4. **Claims 14-18, respectively 20-25** are dependent on claim 13, respectively claim 19 and as such also meet the requirements of the PCT with respect to novelty and inventive step.
